

## CLAIMS

1. A process for producing at least one tetrahydrocarbylaluminumate, which process comprises contacting sodium potassium alloy and at least one trihydrocarbylaluminum compound such that a tetrahydrocarbylaluminumate is formed as a mixture of its sodium salt and potassium salt.
2. A process according to Claim 1 wherein said process is conducted in the absence of an ancillary solvent.
3. A process according to Claim 2 wherein the temperature is in the range of about 60°C to about 150°C.
4. A process according to Claim 2 wherein the temperature is in the range of about 80°C to about 120°C.
5. A process according to Claim 1 wherein said process is conducted in the presence of an ancillary solvent.
6. A process according to Claim 1 wherein the mole ratio of sodium to potassium in said alloy is in the range of about 25:1 to about 1:25.
7. A process according to Claim 1 wherein the mole ratio of sodium to potassium in said alloy is in the range of about 10:1 to about 1:10.
8. A process according to Claim 1 wherein the mole ratio of sodium to potassium in said alloy is in the range of about 5:1 to about 1:5.
9. A process according to Claim 1 wherein said trihydrocarbylaluminum compound has hydrocarbyl groups which have from one to about twenty carbon atoms.

10. A process according to Claim 2 wherein said trihydrocarbylaluminum compound has hydrocarbyl groups which have from one to about twenty carbon atoms, and wherein the mole ratio of sodium to potassium in said alloy is in the range of about 25:1 to about 1:25.

11. A process according to Claim 10 wherein the temperature is in the range of about 60°C to about 150°C.

12. A process according to Claim 9 wherein said hydrocarbyl groups are alkyl groups.

13. A process according to Claim 2 wherein said trihydrocarbylaluminum compound has hydrocarbyl groups which are alkyl groups, and wherein the mole ratio of sodium to potassium in said alloy is in the range of about 25:1 to about 1:25.

14. A process according to Claim 13 wherein the temperature is in the range of about 60°C to about 150°C.

15. A process according to Claim 12 wherein said trihydrocarbylaluminum compound is trimethylaluminum, triethylaluminum, tri-n-propylaluminum, or mixtures of at least two of these.

16. A process according to Claim 2 wherein said trihydrocarbylaluminum compound is trimethylaluminum, triethylaluminum, tri-n-propylaluminum, or mixtures of at least two of these, and wherein the mole ratio of sodium to potassium in said alloy is in the range of about 25:1 to about 1:25.

17. A process according to Claim 16 wherein the temperature is in the range of about 60°C to about 150°C.

18. A process according to Claim 15 wherein said trihydrocarbylaluminum compound is triethylaluminum.

19. A process according to Claim 2 wherein the mole ratio of sodium to potassium in said alloy is in the range of about 10:1 to about 1:10; wherein said trihydrocarbylaluminum compound is trimethylaluminum, triethylaluminum, tri-n-propylaluminum or mixtures of at least two of these; and wherein the temperature is in the range of about 60°C to about 150°C.

20. A process according to Claim 19 wherein said trihydrocarbylaluminum compound is triethylaluminum.

21. A process according to Claim 20 wherein the temperature is in the range of about 80°C to about 120°C.

22. A process according to Claim 2 wherein the mole ratio of sodium to potassium in said alloy is in the range of about 5:1 to about 1:5; wherein said trihydrocarbylaluminum compound is triethylaluminum; and wherein the temperature is in the range of about 80°C to about 120°C.

23. A process according to Claim 1 wherein said process is conducted in the presence of an ancillary solvent, wherein the mole ratio of sodium to potassium in said alloy is in the range of about 25:1 to about 1:25; and wherein said trihydrocarbylaluminum compound has hydrocarbyl groups which have from one to about twenty carbon atoms.

24. A process according to Claim 23 wherein said hydrocarbyl groups are alkyl groups.

25. A process according to Claim 1 wherein said process is conducted in the presence of an ancillary solvent, wherein the mole ratio of sodium to potassium in said alloy is in the range of about 10:1 to about 1:10; and wherein said trihydrocarbylaluminum

compound is trimethylaluminum, triethylaluminum, tri-n-propylaluminum, or mixtures of at least two of these.

26. A process according to Claim 1 wherein said process is conducted in the presence of an ancillary solvent, wherein the mole ratio of sodium to potassium in said alloy is in the range of about 5:1 to about 1:5; and wherein said trihydrocarbylaluminum compound is trimethylaluminum, triethylaluminum, tri-n-propylaluminum, or mixtures of at least two of these.

27. A process according to Claim 1 wherein an excess of the trihydrocarbylaluminum compound relative to sodium potassium alloy is used.

28. A process according to Claim 2 wherein an excess of the trihydrocarbylaluminum compound relative to sodium potassium alloy is used.